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REPORT

ON THE

DEPARTMENT OF AGRICULTURE

ST. LUCIA,

1944.

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SAINT LUCIA.

Report of the Department of Agriculture for the year ended December 31st, 1944.

AGRICULTURE IN THE COLONY.

General Situation.

1. Labour conditions generally reverted further to normal. There was little or no demand for labour on the United States Bases and, as a result, there was a noticeable increase in peasant agriculture as compared with previous years; most estates were able to obtain their labour requirements without difficulty. Labour benefited from an increase in the minimum wage which became effective on October 1st, together with a reduction of the working day from 9 hours to 8 hours.

2. Inland transport conditions were better than in 1943 owing to an improvement in the tyre situation. Sea transport along the Leeward coast was mainly confined to canoes owing to the very intermittent launch service; though this service later improved it was still far from adequate.

Weather Conditions.

3. The year was characterised by the heavy rainfall experienced during the months of May, June and July. The precipitation for May was the highest since 1897; that for June the highest since 1927 and that for July established a new 55 year record i e.. the highest on record from 1890. This excessive rainfall interfered with food production by limiting activities generally and, in July particularly, causing a fair amount of loss of growing crops through landslides and flooding. Rainfall for the months January to April was normal, followed by the abnormal months of May to July; thereafter, with the exception of August, the monthly rainfall kept consistently above the 55-year average. The total rainfall recorded in Castries was 116.46 inches as compared with the 55-year—1890-1944—average of 89.52 inches.

4. Weather conditions for the latter part of the year were more unsettled than for many years previously and there was an unprecedented number of storm warnings. Fortunately the Island was spared any major disaster.

GENERAL CONDITIONS AND PROGRESS IN THE CHIEF INDUSTRIES.

Sugar.

5. Cane yields were generally disappointing due to unfavourable weather conditions during the latter part of 1943 and also to the limited and late cultural work occasioned by the labour shortage; fertiliser applications had also been restricted by short supplies during 1943. Total production was 6,217.57 tons of sugar obtained from 55,146.5 tons of cane ground by the three factories, as compared with 6,629.55 tons of sugar from 62,430.4 tons of cane in 1943. The average extraction ratio was 1 ton of sugar from 8.90 tons of cane (1933—1 to 9.61). The labour supply, though better than for the previous few years, was somewhat erratic; as a result, some cultural work had to be left in arrear and no Spring planting was done.

6. The area reaped in 1944 was 2,085.5 acres and an average yield of 22.9 tons of cane per acre was obtained; the average in 1943 was 26.96 tons of cane per acre from a total of 2,031 acres. The variety B.H. 10 (12) formed 81.5 per cent. of the total acreage reaped; further extension of the variety B. 37161 has been undertaken, also B. 34104. The crop area comprised 13.6 per cent. plant cane, 14 per cent. 1st ratoons, 10.6 per cent. 2nd ratoons and 20 per cent. 3rd ratoons, the remainder, 42 per cent., being 4th ratoons and over.

Molasses and Rum.

7. The quantity of molasses produced was 197,000 gallons as compared with 235,000 gallons in 1943. The entire production was converted into rum with the exception of a small quantity used as stock feed.

8. Rum manufactured was 70,437.6 proof gallons (1943—55,996 proof gallons). None was exported.

9. Production and export of sugar manufactures for the year are shown below:—

Product.	Produced.	Exported.	Value. £
Sugar	6,217.57 tons	4,975 tons	68,993
Molasses	197,000 gallons	...	...
Rum	70,437.6 gallons	...	...

Coconuts.

10. The coconut industry again experienced a record year both in production and export value. The bulk of the crop was manufactured into copra but shipments of nuts were made to Puerto Rico and Barbados at remunerative prices. Some 60 per cent. of the copra exported went to Barbados, the balance being divided up between Venezuela (via Trinidad) Martinique and Guadeloupe. Labour conditions on the estates were satisfactory and there was little or no wastage of nuts. The estimated area under coconuts was 4,600 acres.

11. Increasing use is being made of the Malayan-type copra driers which are now producing the bulk of the Island's copra; more of these driers were erected during the year. Operating technique is improving and the quality of copra produced compares equally with that produced by any other method. Some sun-drying is still done.

12. The contract with the Barbados Co-operative Cotton Factory Ltd. was maintained throughout the year and ready sale was found for the surplus copra. Prices in Barbados varied from £28 to £38 per ton f.o.b., but higher prices were obtained for shipments to other places. The St. Lucia Coconut Growers' Association has continued to inspect all copra received at its warehouse and this service has done much to increase the quality of St. Lucia copra. At the end of the year preparations were being made for St. Lucia's representation at the Conference on Edible Oils to be held in Barbados early in 1945 at the instance of the Comptroller for Development and Welfare.

13. Imports of edible oil into the Colony totalled 5,964 gallons; none was imported by the local Association. Some 22 tons of coconut meal were imported. The local coconut oil industry purchased 128 tons of copra from which 13,824 gallons of edible oil and 51 tons of coconut meal were produced for local use. The small soap factory manufactured 7,500 lb. of laundry soap for local use.

14. The exports of coconuts and copra during 1944 were as follows:—

Coconuts	477,082 nuts valued at	£2,190
Copra	1,344·53 tons (3,011,752 lb.) valued at	39,261
	Total value	£41,451

Limes.

15. Weather conditions were not as favourable as in 1943; yields from old seedling cultivations continued to decline faster than could be made up by yields from young rehabilitated areas; the general result has been a drop in production as compared with the previous year. Flowering was normal and the fruit developed well; oil yields were satisfactory.

16. The total exported lime crop of the Colony was estimated as equivalent to 11,566 barrels of limes valued at £8,413 as compared with 15,116½ barrels valued at £9,228 in 1943. Apart from a small trade with Barbados in green limes the crop was allowed to ripen for juice and oil production. A most welcome feature was the effecting of a contract with the Government of India for the sale of all lime juice at a remunerative price. The demand for distilled lime oil continued firm and the average price realised through the West Indian Lime Oil Sales Company was 27*s.* 1*d.* per lb. f.o.b.

17. A total of 2,233 lime plants, budded on wild Grapefruit stocks, was distributed from the Department's Nurseries during the year. Growth generally has been encouraging, but growers are reminded that the wild grapefruit is to some extent susceptible to attack by Gummosis and therefore precautions should be taken against damage to the crown and stem of the tree during weeding operations, and also when carrying out the "bare rooting" technique against citrus weevil (*Diaprepes*).

18. Exports and values of lime products during 1944 were as follows:—

		£
Green Limes	31 barrels	14
Lime Juice, settled	13,981 gallons	1,222
,, ,, concentrated	1,558 gallons	253
Lime Oil:		
Distilled	4,473 lb.	6,571
Handpressed	141 lb.	353
		£8,413

Cacao.

19. A good early flowering and reasonable weather conditions resulted in a satisfactory main crop; in some areas the heavy rains of mid-1943 rather spoilt the flowering and resulted in a poor set, but the late or carême crop was reasonable. Interest in this industry has revived considerably, encouraged by better marketing conditions and a more normal labour supply.

20. Exports during the year amounted to 4,469.6 cwt. (500,595 lb.) valued at £10,296, thus showing a marked increase over the 1943 exports of 3,254 cwt. valued at £6,980. Exports were marketed through the Commodity Prices Stabilisation Corporation Ltd., of Canada and realised an f.o.b. price of 55*s.* per cwt. for estates' cacao and 50*s.* per cwt. for ordinary. Local prices were 4½*d.* per lb for estates' cacao and 3½*d.*—4¼*d.* per lb for peasants' cacao.

21. Proposals were made during the year for the introduction of budwood of high-yielding I.C.S. clones from Trinidad, and the Agricultural Assistant paid a special visit to Trinidad to familiarise himself with the symptoms of Witches' broom disease and the new virus disease and also to study the propagation technique: unfortunately, it was considered locally that the risk of introducing Witches' broom disease did not make the project worthwhile and the introduction of these clones has now to await the establishment of an intermediate nursery in a neighbouring island.

MINOR AGRICULTURAL INDUSTRIES.

Fresh Fruit Trade.

22. The fresh fruit trade showed an increase over 1943. Trade was mainly with Barbados except for tamarinds which went to Trinidad. In the Colony itself a good variety of fruit was available at reasonable prices, with mangoes, avocadoes, pineapples and grapefruit plentiful in their respective seasons. The day of the Gros Michel banana is now over.

23. 1944 exports under this head were valued at £1,435 (1943—£746) mangoes increased from 482 crates to 2,614 crates (£589). Tamarinds increased from 39,169 lb. to 40,432, with a marked increase in value from £246 to £517. Other exports were 20 crates oranges and 97 crates grapefruit (£29) 38 bunches bananas (£4) and 2,588 crates of miscellaneous fruit (£296).

Vegetables and Ground Provisions.

24. There is as yet no appreciable surplus available for export; exports were valued at £228.

25. Supplies of locally grown produce were considered adequate in all areas during the year, though there were naturally some seasonal shortages on account of unfavourable weather conditions in 1943 and the Castries market could have benefited from a better leeward coastal service. There were two good breadfruit crops, but there is still too much reliance on this staple and not enough extension of crops such as plantains. The production of fresh vegetables could at no time meet the demand; this was in some measure due to the fact that imported vegetable seeds were often unobtainable due to irregular arrivals.

26. The compulsory Food Planting legislation was rescinded in September. Adherence to the requirements of the legislation was fairly satisfactory in some districts, but poor in others despite prosecutions; the question of inspection personnel was also a difficult one.

27. The prevalence of praedial larceny, including the stealing and slaughter of livestock, continues to be a limiting factor in the food production effort. Prices of essential local products have not been unreasonable, though governed more by the law of supply and demand rather than by the scale of prices fixed by the authorities.

Cotton.

28. The 1943/44 crop covered 27 acres and yielded 7,534 lb. of clean lint, an average of 279 lb. of clean lint per acre with a ginning outturn of 33.4 per cent. The Montserrat strain was grown. The total crop was ginned at the local ginnery and exported to the United Kingdom; the price realised was 24*d.* per lb. f.o.b. or an export value of £753. Some 30 acres have been planted for the 1944/45 crop and good growth has been made.

Other Crops.

29. *Coffee.* Production is increasing as new plantings come into bearing; the price for locally grown coffee varied from 1*s.* 3*d.* to 1*s.* 7*d.* per lb. for Liberian. Interest in this crop is increasing.

30. *Corn.* There has been a fair increase in production but the quantity is still far behind the demand and the price is usually above the maximum of 3*d.* per lb.

31. *Rice.* A further increase in production, mainly of upland rice, is recorded from the Southern districts of the Island; it was estimated that just over 200 acres was reaped during 1944. Enquiries are being made as to the possibility of obtaining a portable hulling unit to assist this promising minor industry.

32. *Spices.* Export value has increased from £515 in 1943 to £709 in 1944; products comprised nutmegs, mace, cloves, vanilla and cinnamon. There is some local interest being taken in vanilla cultivation and one estate with a fair area of semi-neglected vanilla is being revived under new ownership.

Bee-Keeping

33. Bee-keepers continue to show enthusiasm. The honey crop was a good one, exports amounting to 108,538 lb. of honey valued at £2,366 (1943—64,916 lb. honey valued at £1,166); no beeswax was exported. About 72 per cent. of the crop went to Barbados, the remainder to the United Kingdom. The local price was about 20*s.* per tin of 56 lb.

Forest Products.

34. Exports of charcoal and firewood to Barbados increased considerably, swelling the value of forest products exported to £11,755 as compared with £8,589 in 1943. Charcoal alone totalled 79,820 bags valued at £9,316, or an increase of 18,616 bags over 1943. Firewood exported amounted to 2,577 cords (1943—769 cords) valued at £2,267. During the year proposals were made to limit the export of charcoal to 60,000 bags per annum but these proposals were not accepted; some limitation on both charcoal and firewood is essential in view of the uncontrolled cutting now practised; the increase of export duties on these commodities which became effective in December may assist to some extent. The demand for local lumber continued to be in excess of the available supply; prices ranged from 4½*d.* to 6*d.* per foot.

Fishing Industry.

35. The position remained unchanged, with fresh fish supplies inadequate to meet the demand and little or no increase in effort. Improvements in boats, gear and technique are very much required.

Livestock.

36. Progress, though slow, is being made in the encouragement of livestock keeping; the average peasant is not by any means averse to keeping animals, but his ideas of the kind of care and attention that they require need changing considerably before any real advance can be made. Again, the increasing larceny and slaughter of stock of all kinds, especially poultry and small stock, is causing loss of interest among persons who, under ordinary circumstances, would benefit the Island by their industry and example.

37. Estate animals have been well maintained and owners have continued to improve both animals and conditions when and where possible; breeding and selection of dairy-type cattle continues, while some excellent mules are being bred and are finding a good market; there is added interest in the improvement of horses and donkeys.

38. The production of milk is still below normal requirements. Two approved dairymen now get a premium of ½*d.* per wine pint; they produce a good quality milk and deliver in standard capped bottles. Many suppliers continue to adulterate their milk.

39. Good hams and bacon have been made by interested estate owners, but only on a limited scale for home use and restricted private sale.

40. 182 permits were issued by the Department for the slaughter of aged, barren and injured female cattle. In certain districts the proportion of injured animals reported is higher than would be expected from the normal hazards of existence.

41. No swine fever was reported during the year and the pig population is rapidly increasing, but the peasantry still continues its uncontrolled method of pig-keeping. Several estate owners do their own inoculation; 137 pigs were inoculated by officers of the Department; greater advantage of this service should be taken by the peasantry, who are charged only a nominal fee far below the actual cost of the vaccine.

42. The service extended by the Department in stocking a varied supply of medicines, minerals, &c., for sale is appreciated by many stockowners.

43. A few importations of poultry, rabbits and goats were made from Barbados with the kind co-operation of the Department of Science and Agriculture.

44. The value of exports during 1944 under this head amounted to £1,235, as follows:—

105	horses valued at	£930	
31	mules „ „	289	
Hides & skins	„ „	16	£1,235

Animal Inspection Service.

45. Animal importations into the Colony were as follows:—

Cattle ...	4
Goats	11
Sheep	6
Poultry & Game ...	69
Asses	1
Dogs	3
Horses	3
Rabbits	6

131 certificates of inspection were issued for animals leaving the Colony.

Soil and Forest Conservation.

(a) *Land Allocation.*

46. No land sales were made during the year in view of the policy of Government to allocate land only on a leasehold basis; there were no applications for land under these conditions other than as mentioned in para. 47.

47. It is of interest to record the use made of the allotments on the Massade Estate in the Gros Islet District which are leased on a 7-year lease; by the end of the year all of the 45 ¼-acre lots had been taken up and the majority planted in food crops. This scheme has been of great value to the Gros Islet village and district generally.

(b) *Soil Conservation*

48. Limited progress was made with the extension of soil conservation work amongst peasant proprietors; lack of appreciation of the value of this work is the main stumbling block. Allottees on the Massade Estate were made to carry out initial soil conservation measures the scope of which is to be extended during 1945. The large-scale demonstration started by one of the sugar companies in 1941 has been maintained but no extension has been possible owing to labour shortage. A few landowners have undertaken such measures as contour drainage of pastures, terracing and contour banking for vegetable and ground provision production, and permanent grassing of steep slopes.

49. Work was commenced on the Morne Giraud Demonstration and Investigation Centre; progress is recorded elsewhere in this report. The one-acre Demonstration plot was maintained and finally incorporated into the Demonstration Centre as part of the Departmental Demonstration section. The Canaries Allotment Scheme has proved its value for another year of successful working: unfortunately its lessons are not yet being repeated on neighbouring lands.

50. Weir records were kept of the Union River during the dry season; the lowest flow recorded was approximately 130 gallons per minute.

(c) *Forest Conservation.*

51. The Report of Mr. J. S. Beard, M.A., B.Sc., Assistant Conservator of Forests, Lesser Antilles Division, was issued early in the year and reveals the urgent need of a sound policy of forest, soil and water conservation. The report received active consideration during the year and a Forestry Policy based on Mr. Beard's recommendations was passed by the Legislative Council in December. A draft Ordinance to make provision for the Conservation of the Forest, Soil and Water Resources of the Colony has been prepared and is to be presented to the Legislative Council early in 1945.

52. The two forest patrols have been active throughout the year and, with the co-operation of the Crown Lands Overseer, have exercised considerable control over squatting and illicit timber cutting; one Forest Ranger, part of the staff recommended by Mr. Beard, assumed duty in the latter half of the year after preliminary training in Trinidad and is at present stationed in the Southern district.

53. Reafforestation work in the Quilesse area has been mainly confined to maintenance and supplying of existing plantings: good growth generally has been made; some of the selected tenants in the Quilesse area have been ejected for non-compliance with conditions. 525 plants of Blue Mahoe—seed obtained from Jamaica—have been planted out at the Barre de l'Isle Nursery.

54. The shortage of surveyors is still holding up the survey and escheat of all vacant lands provided for under a Development and Welfare Scheme.

55. Uncontrolled timber cutting in the dry eroded areas of the Colony continues without a thought for the future.

IMPORTATION OF FOODSTUFFS.

56. The total value of Imports of the principal foodstuffs shows a slight increase over 1943. The main increase is in the value of fish (other than salmon, etc.) with an imported value of £18,128 as compared with £8,569 in 1943. The value of flour imports also increased by £5,806 to £53,687. Decreases worthy of note were:—edible oil £1,912, a decrease of of £2,748; salted, pickled and smoked meat £5,071, a decrease of £7,822; canned meat £342, a decrease of £1,671.

57. Once again conditions exerted a favourable influence on the regular and better use of local foodstuffs, and production definitely increased in 1944. Greater production and use, in preference to the imported article, of peas and beans is to be encouraged; coffee production locally is on the increase and should, in time, influence the value of imports (1944—£2,022).

WORK IN THE DEPARTMENT OF AGRICULTURE.

Plant and Seed Introduction etc.

58. Introduction of planting material during the year comprised 6 plants and 20 packets of seeds and 11 cuttings including one new sugar cane variety; in addition, every effort was made to maintain supplies of imported vegetable seeds for local sale, though this was at times difficult owing to infrequent shipping facilities. Details of the more important introductions are as follows:—

Eucalyptus deglupta	1 packet	I.C.T.A., Trinidad.
Avocado pear	5 plants	Dominica.
Blue Mahoe	1 packet	Jamaica.
Carat palm	1 ,,	Trinidad.
Algaroba	1 ,,	Antigua.
Sugar Cane—1 variety	5 cuttings	Plant Quarantine Station, Trinidad.
Bambusa arundinacea	2 plants	do.
Dendrocalamus giganteous	2 ,,	do.
Bambusa tulda	2 ,,	do.
Sabal palm	1 packet	Puerto Rico.

59. The Plant Inspection Service dealt with a total of 7 importations exclusive of those mentioned above. All were admitted. 15 certificates of inspection were issued for planting material leaving the Colony. The fumigatorium on the wharfside has been regularly used for routine fumigation of stored animal feeds.

60. The distribution of planting material from the Department's Plant Nurseries during 1944 is shown below:—

	Plants.	*Cuttings.*	*Seeds.*	*Truck Loads.*
Budded limes ...	2,233	...	...	...
Other Citrus* ...	4,982	...	...	...
Coffee and Spices ...	5,387	...	...	...
Fodder and pasture plants and grasses	3,100	...	...	39
Cane	...	474	...	...
Coconuts	559	...	...	...
Economic and food crops ...	7,151	4,900	43 lb. 2 ozs.	...
Timber and economic trees ...	2,591	...	...	...
Ornamentals	989	100	...	
Miscellaneous	101		...	...

* Includes 1,500 sour orange seedlings used as stocks for nursery work.

Work at the Union Agricultural Station.

61. The maintenance of seed supplies and the production of planting material connected with the Food Production Campaign has continued to be the main function of the Station; notes on the main crops follow:—

62. *Yams.* The area under this crop was extended and the following varieties planted: Lisbon, Chinese or Potato and "Piquant". Heavy yields were obtained, Lisbon (ordinary) and Bottle-neck Lisbon averaging 27 and 21 tons per acre respectively; "Piquant" averaged 13 tons per acre from 2 reapings, while the Chinese yam yielded at the rate of 34 tons.

63. *Sweet Potatoes.* The varieties Black Rock, B.44 and B.52 were maintained for the supply of planting material.

64. *Adlay.* A yield of 1,500 lb. per acre was obtained with a good ratoon crop in prospect.

65. *Corn (Maize).* A planting following the 1943 yam harvest yielded 2,100 lb. of shelled grain per acre; a similar planting in December gives excellent prospects.

66. *Papaw.* Trials with papain extraction were disappointing and had to be discontinued.

67. *Peas and Beans.* Soya beans gave increased yields but proved difficult to establish on account of mole cricket attack. Results from Tepary beans were poor. A new introduction, the Antigua Six Weeks, is showing up well. A good crop of Mauritius peas was obtained.

68. The Sugar-cane variety section was maintained in satisfactory condition and plants of varieties were distributed according to the recommendations of the B.W.I. Central Cane Breeding Station.

69. The vegetable section was fully cropped and good results were obtained; a considerable amount of eschalot bulbs was distributed.

70. There was an increased demand for dwarf coconuts for planting and the production of the plot was fully utilised; yields have been satisfactory.

71. The Cavendish banana plot averaged 51.4 count bunches per acre per month.

72. *Leucaena glauca* has made good growth and the area is covering over well.

GOVERNMENT STOCK FARM, UNION STATION.

73. Additions to the breeding stock of the Station comprised the following:—

Donkey:—One (1) jack donkey from Jamaica.

Poultry:—Two (2) Rhode Island Red (dark strain) cocks from Barbados and ten pullets bred on the Station.

Rabbits:—Two (2) buck rabbits from Barbados, 2 locally bred does from imported stock and 2 does bred on the Station.

74. The Large Black boar was on service at the Station throughout the year. One old sow was sold as unfit for further breeding. Twenty-one (21) Large Black piglings were sold.

75. Rabbit breeding was continued and eighteen litters were obtained. Three does were culled from the breeding stock and replaced by better animals. Of the thirty-six rabbits weaned during the year eight bucks and five does were distributed by sale and gifts to schools.

76. The British Alpine—Saanen doe kidded in April; the kid, a doe, shows promise. The milk yield of the doe was lower than expected, averaging just over 3½ pints per day. Little use has been made of the British Alpine—Toggenburg buck; he has developed into a fine animal.

77. One half-bred jenny donkey was born. The new jack which arrived from Jamaica in December should do good work in the Colony.

78. The areas under fodder were maintained and yields were satisfactory.

79. Excellent progress has been made with the flock of Rhode Island Red (dark strain) poultry. A total of 1,992 eggs was laid of which 1,781 found a ready sale for hatching; the remainder, laid during the moulting season, were disposed of as infertile eggs for eating. The ten pullets added to the flock commenced laying in September and greatly increased egg production is anticipated in the coming year. Selection work continues and the results can already be seen. Of the thirty-one chickens hatched ten pullets were retained and 21 cockerels sold. Further hatching was in progress at the end of the year in order to increase the breeding stock during 1945.

80. The return of tours and services is set out below :—

	Station Services.	Tours.	Days on Tour.	Out-station Services.
Stallion 'Millersdale' ...	40	—	—	—
⅜ Holstein-Zebu Bull 'Arneaud' ...	11	—	—	—
⅜ Holstein-Zebu Bull 'Penco' ...	31	—	—	—
Sussex Bull	—	1	365	12
Jack Donkey 'John'	9	1	31	—
Large Black Boar No. 1 ...	18	—	—	—
Large Black Boar No. 2 ...	—	1	365	4
Large Black Boar No. 3 ...	—	1	130	—
Buck Goat	26	—	—	—
Buck Rabbit	37	—	—	—

Plant Nurseries.

81. The Departmental Nurseries at the Barre de L'Isle, Rabot and Union were engaged in the propagation of citrus and other economic crops for distribution. The Quilesse Nursery is reserved for propagation work with local and introduced forest trees for reafforestation work. All Nurseries have continued to demonstrate soil conservation measures. Work on the Nursery site at St. Jour is progressing slowly; funds for its development have been provided for in the 1945 Estimates.

82. The Sapucaia nut (*Lecythis Zabucajo*) plots at the Barre de L'Isle and Quilesse Nurseries have not made good progress under the wet conditions; no plantings have yet been made in the drier areas. The Brazil nuts are making excellent growth so far and this nut will be used to replace failures in the Sapucaia nut sections.

Pests and Diseases.

83. Further losses of seedling lime trees occurred as a result of the "Red root" complex: replanting with budded limes in suitable areas has been undertaken.

84. Occasional cases of coconut bud-rot were dealt with. The small moth borer, *Diatraea canella*, continues as the most serious pest of sugar cane but as yet no immediate control measures are in sight. Efforts are under way to secure the introduction of *Plaesius javanus*, a predator of the banana weevil, and also certain Coccinellid predators of the coconut scale.

85. Rats continue to do damage the extent of which is not yet sufficiently appreciated locally. Attention has also been directed to the apparent increase of the Fer-de-lance (*Bothrops atrox*) and Government has under consideration the organisation of a snake campaign during the dry months of 1945.

86. Outbreaks of Cotton Leafworm were controlled by lead arsenate sprays. No Pink Bollworm was seen; the cotton close season was well observed.

87. Mr. W. T. Dale, B.Sc., of the Department of Mycology of the Imperial College of Tropical Agriculture, visited the Colony in September and made a general survey of mycological problems, with particular reference to cacao. Mr. Dale has made the first record of the presence of Cercospora leafspot disease of bananas.

88. Mr. R. G. Fennah, M.A., A.I.C.T.A., F.R.E.S., continued his investigations as Food Crop Pests Entomologist, Windward and Leeward Islands, and maintained his headquarters in the Colony.

Agricultural Extension and Education.

89. Peasant advisory work was carried out within the limitations of inadequate field staff and the demands of other Departmental work. Soil conservation, food production and the better care of livestock were the main features emphasised.

90. Mention has already been made of the Canaries Allotment Scheme and the allotments on the Massade Estate. The Reuonné Rice Scheme near Vieux-Fort has itself received little support and its fate will be decided in 1945; but it has played a great part in encouraging rice growing generally. Other allotment schemes have remained in abeyance owing to the lack of interest, unwillingness to observe the conditions laid down or the absence of supervisory staff.

91. Mango and citrus top working for peasants and others was carried on; 154 mangoes and 25 citrus were topworked.

92. The annual course of lectures and demonstrations was given to Teachers during the summer vacation; attendance was fairly good and the field outings were, as usual, a success. Papers were set and corrected for the Agricultural part of the Teachers' Certificate Examination. Reports were furnished to the Education Officer.

93. The thirty-sixth annual examination of the Primary Schools was conducted by the Agricultural Officers and a report submitted to the Education Officer. Many schools still lack suitable gardens. Further supplies of tools were obtained and distributed

94. The Babonneau and Choiseul Young Farmers' Clubs have done useful work and set a good example for other schools to follow. More field staff is needed to foster this Movement. The Babonneau Club visited the Union Agricultural Station and took a keen interest in the various demonstrations.

95. Three Junior Agricultural Apprentices were in residence at the Union Agricultural Station; two left without notice to join the Windward Islands Battalion during the course of the year.

Agricultural and Industrial Exhibition.

96. Early in the year a Committee was appointed, with the Agricultural Superintendent as Chairman, to make arrangements for holding an Agricultural, Industrial and Health Exhibition in February, 1945, under the auspices of the St. Lucia Agricultural and Commercial Society. The Comptroller for Development and Welfare has given ready assistance in the form of a grant to help defray expenses. There has been no such exhibition held since 1930. Arrangements were well under way by the end of the year.

97. St. Lucia's industries and attractions as a holiday resort were emphasised at the Annual Agricultural and Industrial Exhibition held in

Barbados in December. Mr. J. R. L. Johnson was sent to Barbados as the Colony's representative; his stall attracted much attention and enquiries were both numerous and promising.

Development and Welfare Schemes.

98. The Development and Welfare Schemes so far approved for this Department are discussed in the following paragraphs.

99. *D. 13 (a.g.) Tools and Prizes School Gardens. £50 for tools, £20 for Prizes.* The amount allocated for tools has been spent and the tools distributed. The allocation for prizes is to be spent as opportunity offers.

100. *D. 91 Morne Giraud Investigation and Demonstration Centre, £3,991.* Work was commenced in March and by the end of the year considerable progress had been made. Two permanent fodder sections, comprising about 3 acres of Uba cane and 1½ acres of Guinea grass, have been established. The Departmental Demonstration section was laid out and developed and some initial cropping done with good results. Part of the Model Holdings section has been completed; arable strips alternate with barrier strips of Elephant grass, Guinea grass and Uba cane. Quarters for the Overseer and Stockman have been completed and work on the stock-pen was well advanced. The paddock area has been extended and the establishment of pasture grass commenced. The whole area has been fenced. Already the Centre is attracting a great amount of interest. It is unfortunate that recording work is being held up on account of the lack of a surveyor to determine the necessary areas; strict records of expenditure are being kept. Some 10 acres were under control by the end of the year.

101. *D. 91 (b) La Fargue Investigation and Demonstration Centre £4,485.* This scheme will not be commenced until the Morne Giraud scheme has been fully launched owing to shortage of staff. The purchase of the area, 89 acres, was completed during the year.

102. *D. 92 Agricultural Department Staff £7,821.* Apart from two junior appointments made in 1943 it has not been possible to make any appointments during 1944 owing to the lack of suitable personnel.

103. *D. 93 (a) Pasture Improvement £500.* Establishment of the grazing grass was more or less completed by the end of the year.

104. *D. 93 (b) Grass Nurseries £250.* Maintenance work was carried on in the Northern area and the establishment of a nursery commenced in the Southern area.

105. *D. 94 Reafforestation £500.* Small expenditure has been incurred. Further work awaits the staffing of the Forestry division of the Department and the organisation of work by the Assistant Conservator of Forests, Lesser Antilles Division.

106 *264 Quarters for Farm Manager and Labourers, Government Stock Farm, Union £2,000.* Construction of the Farm Manager's house has proceeded by the Public Works Department.

107. *D. 264 Farm Manager, Government Stock Farm £2,400.* In view of changed conditions it is unlikely that this scheme will be proceeded with.

Publications, Correspondence and Organisations.

108. Various reports and memoranda, in addition to the normal monthly, quarterly and annual returns, were submitted as required.

109. 824 incoming letters, 755 outgoing letters and 315 Minute Papers (involving 473 replies) were dealt with during the year.

110. A large number of bulletins and reports was regularly received from Departments of Agriculture and other Agricultural Institutions in all parts of the world and these are gratefully acknowledged.

111. The Agricultural Superintendent and Agricultural Assistant (also as Acting Agricultural Superintendent) attended numerous meetings during the year. Four meetings of the Board of Agriculture were held. The Exhibition Committee and the United States Bases Compensation Committee held several meetings.

Official Visitors.

112. Official visitors to the Department were :—

Mr. C. C. Skeete, B.A., Director of Agriculture for the Windward Islands.

Mr. J. S. Beard, Assistant Conservator of Forests, Lesser Antilles Division.

Mr. C. T. Watts, College Engineer, Imperial College of Tropical Agriculture.

Staff.

113. Mr. C. C. Skeete was appointed Director of Agriculture for the Windward Islands in June and paid three visits to the Colony.

114. Mr. E. T. Ward, Agricultural Superintendent, was absent from the Colony on leave from 17th May to 21st June and left the Colony on leave prior to transfer on 4th December. The value of Mr. Ward's work during his six years service as Agricultural Superintendent cannot adequately be assessed here; the Colony has much to thank him for.

115. Mr. G. B. Gregory was absent from the Colony on official duty in Trinidad from 16th to 27th April. He was appointed to act as Agricultural Superintendent during the absence of the Agricultural Superintendent from the Colony.

116. Mr. G. M. Glasgow, Senior Agricultural Instructor, Soufrière, six months leave prior to retirement from 16th September.

117. Mr. C. M. Alexander, Senior Agricultural Instructor, Castries, went on returned from vacation leave on 4th April.

118. Mr. A. Isaac arrived from Dominica and assumed duties as Acting Senior Agricultural Instructor on 1st August.

Legislation Affecting Agricultural Industries.

119. New legislation passed during 1944 was as follows :

Export Duties (Amendment) Ordinance No. 15 of 1944. To amend the law relating to Export Duties on charcoal, copra and coconuts, and firewood.

Excise Duty (Sugar) (Continuance and Amendment) Ordinance No. 5 of 1944. An ordinance to continue and further amend the Excise Duty (Sugar) Ordinance 1941.

Excise Duty (Sugar) (Amendment No. 2) Ordinance No. 14 of 1944 to amend the Excise Duty (Sugar) Ordinance, 1941.

Animals Trespass (Amendment) Ordinance No. 18 of 1944. An ordinance further to amend the Animals Trespass Ordinance.

Sugar Control (Quota and Local Consumption) Order, Statutory Rules and Orders No. 1 of 1944 (18th March 1944).

Sugar Control (Quota and Local Consumption) (Amendment) Order No. 26 of 1944 (26th August, 1944).

Defence (Food Production Control) (Cancellation) Order, Statutory Rules & Orders No. 31 of 1944 (23rd September, 1944).

Labour (Minimum Wage) (Agricultural Labourers) Order, Statutory Rules and Orders No. 32 of 1944 (1st October, 1944).

RAINFALL RETURNS, 1944.

Observation Stations.	Jan.	Feb.	Mch.	Apr.	May.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.	Maximum in one day and date.		No. of days of rain.
	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.		
Gros Islet Village ..	3·62	2·43	2·39	1·39	7·83	7·83	15·24	5·19	5·78	6·98	8·54	6·63	73·85	3·87	18th Nov.	155
Cap Estate ...	1·36	1·43	2·11	·45	4·72	8·93	17·22	4·11	5·48	8·77	7·00	7·53	69·11	3·64	23rd July	107
Castries, Corinth ...	4·13	1·53	1·75	1·90	13·24	8·76	18·45	8·00	7·35	7·77	8·14	8·11	89·13	3·40	14th Nov.	235
Marquis Estate ...	1·76	1·22	2·12	·87	12·14	11·65	18·44	8·52	9·65	10·35	10·32	11·76	88·80	3·70	,,	176
†Union Experimental Stn.	3·26	1·88	1·75	2·46	21·34	11·45	16·87	7·04	7·82	11·95	11·61	10·45	107·88	5·00	,,	272
*Choc Estate ...	2·48	1·21	1·48	1·14	11·02	8·74	13·47	4·31	3·14	6·47	...	...	...	...	...	...
George V Park ...	4·34	2·45	2·83	1·91	14·93	16·01	19·17	8·69	8·79	12·96	12·52	11·86	116·46	4.81	14th Nov.	252
Victoria Hospital ...	2·66	1·57	2·28	1·35	12·35	12·35	13·44	6·94	7·82	12·49	11·45	8·04	92·74	5·43	,,	238
Soucis Est., Cul-de-Sac	3·94	2·03	2·45	2·18	14·81	14·89	24·00	12·61	12·53	15·54	7·64	13·22	125·84	4·20	24th July	163
Crown Lands Est., ,,	4·90	3·40	4·50	1·20	14·55	11·20	22·55	11·50	13·10	15·55	10·80	13·42	126 67	3·30	17th July	166
Mont D'Or Est., Roseau	4·88	3·02	3·55	2·23	11·88	11·53	19·75	10·25	10·66	16·90	15·35	12·80	122·80	3·10	19th Oct.	213
Belair Estate, ,, ...	3·42	2·11	3·84	1·16	10·08	7·45	12·36	6·32	9·40	15·42	8·95	6·77	87·28	2·66	24th July	236
Vanard ,, ,, ...	5·12	2.63	3·51	2·12	13·21	12·10	21·29	10·62	10·74	16·93	13·54	12·92	124·73	4·00	19th Oct.	208
Roseau ,, ,, ...	3·88	2·61	4·16	1·77	14·27	10·26	20·29	7·34	7·13	20·35	11·90	9·83	113·79	5·20	18th Oct.	262
†Barre de l'Isle Nursery	6·64	3·02	3·67	3·37	15 29	12·33	21·19	12·23	11·45	21·76	16·59	14·62	142·46	...	...	...
Soufrière, La Perle Estate	5·55	4·04	3·17	1·31	13·83	11·08	20·38	9·86	9·17	14·63	9·05	10·75	112·82	6·10	24th July	235
Ruby Estate ...	3·80	3·04	3·27	1·12	13·50	12 09	20·28	11·01	8·10	15.83	10·98	12·70	114·92	6·15	,,	221
Union Vale Estate ...	2·14	·49	·75	1·33	12·57	9·02	18·03	6·54	11·44	20·45	10·28	6·31	99·35	8·00	19th Oct.	178
Beausejour ,, ...	4·47	3·56	5·61	2·21	14·56	11·59	18·50	10·27	15·32	15.86	9·42	10·22	121·59	5·50	24th July	301
Belle Plaine ,, ,,	4·75	3·62	5·69	2·71	15 45	12·54	17·62	10·90	15·75	17·66	10·76	12·22	129·67	5·45	,,	284
Rabot Estate ...	4·57	2·48	3·37	1·95	14·75	11·26	18·11	9·49	10·81	19·14	11·01	9·59	116·53	5·50	,,	258
†Rabot Nursery ...	4·25	2·58	2·97	1·59	13·55	11·39	18·09	9·44	12·00	20·44	10·70	9·25	116·25	5·69	18th Oct.	276
†Quilesse ,, ...	6·99	4·10	7·92	5·19	23 36	15·23	26·27	17·81	16·23	21·79	17·46	15 27	177·62	7·20	25th July	263
Choiseul, Morne Lezard Est.	4·89	2·30	2·44	·77	9·41	8·38	13·65	10·05	11·87	13·87	6·69	9·71	94·03	6·00	24th July	178
Park Estate ...	3·36	2·73	3·35	2·52	12·43	10·70	12·65	10·35	14·78	18·24	8·89	10·15	110·15	2·12	19th Oct.	289
*Woodlands Estate ...	3·98	2·05	4·32	1·94	16·75	8·86	20·14	11·55	14·98	...	16·91	11·71	...	...	...	...
Londonderry Estate ...	3·27	2·09	2·23	·87	10·22	7·92	17·96	8·28	8·24	12·55	7·61	9·09	90·33	7·70	24th July	155
Balembouche Estate ...	2·52	1·06	3·48	·29	11·39	7·40	13·53	8·94	11·52	10·32	7·69	6·25	84.30	5·60	,,	109
*Laborie, Giraud Estate ...	4·20	2·76	2·93	1·71	12·46	9 08	22·08	8 99	12.78	17·10	8·11	...	..	...	...	...
Vieux-Fort, Moule-à-Chique	1·63	1·61	1 85	·42	5·58	5·34	10·39	8·13	9·12	7·42	4·78	5·23	61·50	4·11	24th July	160
Beane Field ...	2·50	2·10	1·57	·75	8 29	5·64	13·65	8·54	9·19	10·65	4·49	8·30	75·67	5·30	,,	293
Micoud, Troumassée Est.	2·20	·15	1·50	·06	16·50	9·50	14·05	9·10	6·00	11·92	7·31	15·75	94 04	5·50	30th May	65
Mamiku Estate ...	2·71	1·53	1·57	·65	10·41	6·78	12·99	8·12	9·08	13·50	10·41	7·04	64 79	3·81	24th July	256
Fonds Estate ...	3·82	1·21	2·90	·93	14·55	9·33	14·37	7·93	10·84	14·02	11·48	9·86	101·24	3·62	7th May	265
Dennery, Prospect Est. ...	2·82	3·56	2·66	1·90	14·64	9·94	18·45	10·49	11·38	16·33	14·76	13·86	120·79	3·50	14th Nov.	250
Border Estate ...	6·04	2·88	2·73	2·52	15·52	16·19	22·87	13·48	17·63	23·39	18·28	14·71	156·24	4·44	15th Nov.	313
La Cayé Estate ...	3·22	2·28	1·61	1·74	10·03	8·67	14·46	10·51	12·55	13·41	12·53	12·81	103·82	3·75	24th July	...
Ressource Estate ...	4·81	2·29	2·14	2·29	10·93	7·68	17·70	5·52	16·36	16·29	12·53	13·78	112·32	...	...	...

* Record not complete. † Departmental.

Maxima= Quilesse Nursery. 177·62" Union Vale. 8"—19th Oct. Border. 313 days.

STAFF OF THE DEPARTMENT OF AGRICULTURE, ST. LUCIA.

E. T. Ward (1) Dip. Agric. (South Africa) ...	Agricultural Superintendent and Land Officer.
G. B. Gregory (2) Dip. Agric. (I.T.C.A.) ...	Agricultural Assistant.
G. M. Glasgow (3)	Senior Agricultural Instructor.
C. M. Alexander	„ „ „
A. Isaac (4)	Acting Senior Agricultural Instructor.
A. Williams (5)	Forest Ranger.
L. Beaubrun	Junior Agricultural Instructor.
C. Laporte	„ „ „
G. M. Cambell	Foreman, Union Station.
Miss E. T. Bouty	Chief Clerk and Accountant.
J. F. Girard	Second Clerk.
Miss F. Clauzel (6)	Clerk in Training.
D. G. Mason (7)	„ „

(1) On leave prior to transfer from 4th December.
(2) Acting Agricultural Superintendent from 4th December.
(3) On leave prior to retirement from 16th September.
(4) From 1st August.
(5) From 1st August.
(6) Transferred to Audit Department 21st September.
(7) From 21st September.

REVISED PRICES OF NURSERY PLANTS AND SUPPLIES.

1. The prices of plants do not include the cost of the box or package, for which a charge will be made if not returned to the Department. The cost of delivery will, as far as possible, be included in the prices, but it must be understood that this is a matter entirely in the discretion of the Agricultural Superintendent.

2. All prices specified are for plants of standard quality. The prices of plants not included in this list will be fixed by the Agricultural Superintendent.

3. An addition of 100 per cent. is made on the price of all plants supplied for export from the Colony.

4. No plants are supplied on public holidays.

5. At least six months previous notice must be given when large numbers of such plants as bananas, coconuts, coffee, cacao, nutmegs, citrus, cane plants, &c., are required. All such orders should be in writing, and verbal or telephone messages should be confirmed in writing. In default of this rule such orders may not be attended to.

6. All orders will be supplied subject to the discretion of the Agricultural Superintendent and no responsibility is taken in regard to quality or quantity of plants after despatch from the Nurseries.

7. Complaints as to the quality and quantity of plants, &c., supplied, or as to the prices charged, should be made in writing to the Agricultural Superintendent at the time of delivery.

ALL PLANTING MATERIAL MUST BE PAID FOR BEFORE DELIVERY.

I. PLANTS.

	s.	*d.*	
Banana Plants (sections or suckers)			1 per plant (delivered at Quilesse Nursery)*
Oranges Budded			4 per plant.
Oranges Sour			6 per hundred.
Grapefruit Budded			4 per plant.
Lime Plants Budded/Grafted			4 per plant.
Mangoes Budded/Grafted			6 to 1*s.* per plant.
Coffee Plants	1	0	to 2*s.* per hundred.
Cacao Budded			6 per plant.
Nutmegs Grafted			6 per plant.
Avocado Pears			2 to 3*d.* per plant.
Avocado Grafted			6 per plant.
Cane Plants	1	0	per hundred (delivered at Nursery)
Pineapple Plants			1 to 3*d.* per plant.
Casuarina	2	0	per hundred.
Casuarina (in pots)			2 each.
Palms (various)			3 per plant.
Ornamental Plants (various)			2 to 1*s.* per plant.
Seeds (various)			2 to 3*d.* per packet.
Plants for windbreaks, hedges, &c., other than the above mentioned	2	0	per hundred.
Plants for windbreaks, hedges, &c., other than the above mentioned (in pots)			2 each.
Fodder Plants	1	0	to 2*s.* per hundred (delivered at Nursery
Cover Crops and Green Manures			2 per lb.
Grass	1	0	per sugar bag.

* Transport charges from Quilesse to Mahaut to point of delivery are extra.